Combustion

1. **Type of Heating Unit:**
Indicate use of heating unit (i.e. boiler, radiant space heater, drying oven, incinerator, etc.).

Identification:
Indicate the name or number of the heating unit as known by the plant.

2. **Heat Input Rate:**
Indicate rated heat input capacity in million Btu per hour.

Note on fuel(s) used:
Check any fuels that are not applicable. If the unit has any capability of using a fuel, even if on a backup or intermittent basis; fill out the applicable section. Using a fuel that is not specified in the permit is a violation of the permit. This section is necessary to include that fuel on your permit. If you intend to use a fuel as a back up or intermittent basis, indicate any acceptable limits on page 2 of 2. (The boxes containing N/A indicate questions not applicable to that type of combustion used.)

3. **Combustion Process:** Check the applicable process(es).

4. **Fueled by natural gas:**
Firing: Check the appropriate technology. *Note that tangential firing applies only to boilers.*

Fueled by residual oil:

A. *Grade of residual oil used:* Indicate either No. 5 (H for heavy, L for light) or No. 6.

B. *Percent Sulfur:* Indicate sulfur content of fuel on a weight percentage basis if sulfur content is not indicated, a default value of 2% will be used.

C. *Firing:* Check the applicable firing technology.

Fueled by distillate fuel:

A. *Grade of distillate fuel used:* Check the appropriate fuel.

B. *Percent sulfur:* Indicate the sulfur content of fuel on a weight percentage basis. If sulfur content is not indicated, the following default values will be used:

No.1 0.5%
No.2 0.5%
No.4 2.0%

Heating Value: Indicate heating value in Btu/gallon.

C. *Firing:* Check the applicable firing technology.

Fueled by a process gas: (include coke oven gas and blast furnace gas)
Type of gas: Indicate the source of the gas.

Percent sulfur: Indicate the weight percentage of sulfur in the gas. If not indicated, the default value is 1 percent sulfur.
Heating value: Indicate the heating value of the gas in Btu per cubic foot.

Fill out if Fueled by Coal:

A. *Coal used:* Check the appropriate class of fuel.

B. *State of origin:* State where the coal was mined. Indicate county and seam, if known.

D. *Heating value:* Indicate minimum heating value of coal used. If more than one coal is used, indicate the lowest heating value. Also, indicate whether heating value was calculated on a dry or moist basis.

Percent ash: Indicate maximum ash content on a weight percentage basis. If more than one coal is used, indicate the highest ash content.

Percent sulfur: Indicate maximum sulfur content on a weight percentage basis. If more than one coal is used, indicate the sulfur content.

. C. *Percent moisture:* Indicate average moisture content of coal as delivered to the combustor.

5. **Fueled by waste oil:** This refers to used crankcase oil, hydraulic fluid, automatic transmission fluid, machining oil, and similar fluids. (Also, see Form Y for other Title III toxics.)

A. *Heating Value:* Indicate heating value of waste oil in Btu per gallon.

B. *Percent of heat provided by waste oil:* 100 % unless another fuel is used.

C. *Percent ash:* Indicate weight percentage ash in the waste oil. If no value is indicated, the default value is 0.5%.

Percent sulfur: Indicate weight percentage sulfur in the waste oil. If no value is indicated, the default value is 2.0%.

Percent chlorine: Indicate the weight percentage chlorine in the waste oil. If no value is indicated, the default value is 1.0 %.

Percent lead: Indicate the weight percentage lead in the waste oil. If no value is indicated, the default value is 1.0 %.

Fueled by liquid waste "other than waste oil": (Also, see Form Y for other Title III toxics.)

A. Percent heat provided by liquid waste: Indicate the portion of heat input that is provided by the liquid waste. Liquid waste is usually co-fired with other fuel.

B. Heating value: Indicate the heating value of the liquid waste in Btu per gallon. Use attached sheets to specify heating value, sulfur content, chlorine content, fluorine content, heavy metal(lead, chromium, arsenic, antimony, beryllium, cadmium, cobalt, manganese, mercury, and selenium) content.

C. Percent sulfur: Indicate the weight percentage sulfur in the wastes. If no value is indicated, the default value is 2.0%.

Percent chlorine: Indicate the weight percentage chlorine in the waste. If no value is indicated, the default is 1.0%.

Percent fluorine: Indicate the weight percentage fluorine in the waste. If no value is indicated, the default value is 1.0%.

D. *Special or hazardous waste:* Indicate each special or hazardous waste to be burned. Include RCRA alphanumeric code. Attach sheets for each S or H waste.

6. **Fueled by liquified petroleum gas:**

Percent Butane: Indicate the weight percentage butane content in the LP gas.

Percent Propane: Indicate the weight percentage propane content in the LP gas.
Percent Sulfur: Indicate the weight percentage sulfur content in the LP gas. Default value is 1.5%.

7. **Fueled by wood, wood waste, and/or bark:**

A. *Check one:* Wood or wood waste, bark only, wood & bark

B. *Percent Moisture:* Indicate maximum weight percentage moisture content. If no value is indicated, the default value is 30%.

Heating Value: Indicate heating value of wood products in Btu/lb.

8. **Fueled by tires or tire derived fuel (TDF):** (Also, see Form Y for other Title III toxics.)

A. *Check one:* Whole tires, tire derived fuel.

B. *Heating value:* Indicate the heating value of the tires/TDF in Btu/lb or Btu/tire.

Percent of heat supplied by tires/TDF: Indicate the portion of heat input that is provided by the tires/TDF. Tire/TDF are usually co-fired.

C. *Percent sulfur:* Indicate the weight percentage sulfur in the tires/TDF. If no value is indicated, the default value is 2.5%.

Percent chromium: Indicate the weight percentage chromium in the tires/TDF. If no value is indicated the default value is 0.2%.

Percent chlorine: indicate the weight percentage chlorine in the tires/TDF. If no value is indicated, the default value is 0.3%.

D. *Type of combustor:* Indicate the type of equipment in which tires/TDF is combusted (i.e. conventional cement kiln, cyclone, combustor, etc.).

9. **Fueled by solid waste:**

A. *Percent heat supplied by solid waste:* Indicate the amount of heat supplied by the solid waste. Solid waste is sometimes co-fired with other fuels. Do not use this form if the solid waste supplies less than 50% of the heat input. If solid waste supplied less than 50% of the heat input, the device is considered a solid waste incinerator.

B. *Heating value of waste:* Indicate the heating value of the waste. Do not include the heating value of any supplemental fuel used.

C. *Type of combustor:* Indicate type of equipment used to burn solid waste (i.e. stoker, waterwall, rotary kiln, etc.).

D. *Special or hazardous waste:* Indicate each special or hazardous waste to be burned.

10. **Emission controls:**

If any of the fuel combustion units are boilers, fill out this section. This section also applies to any other forms of indicated heating equipment. It is absolutely necessary to complete this section to assure compliance with 326 IAC 6. Indicate the identification, heat input capacity, date installed, and permit number (or date of registration letter) that applies to each unit. It will facilitate review of the application if copies of permits and/or registrations that apply to previously installed units are attached. Please note to which permits apply the indirect heating unit(s). Use as many additional sheets as necessary. Note each additional sheet as relating to this form.

Indicate any acceptable fuel consumption limits:
In the case that one or more fuel is burned either intermittently or as a backup, i.e. stating an acceptable limit on fuel consumption at this point will facilitate permit review. If a limit is not stated, it will be assumed that the fuel will be burned at the full rated capacity of the unit for 8760 hours per year.